Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BOYD B. BUSHMAN

Appeal No. 97-0514
Application 08/345,114[1]

ON BRIEF

Before CALVERT, FRANKFORT and DIXON, Administrative Patent Judges.

CALVERT, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 to 27, all the claims in the application.

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[1] Application for patent filed November 28, 1994.

The claims on appeal are drawn to a system and method for evaluating defects, and a system for measuring an unknown parameter of a material. A copy of the claims is contained in Appendix A of appellant's brief.

The references applied by the examiner in the final rejection are:

Seddick	3,992,663	Nov. 16, 1976
Fichtenbaum	4,186,338	Jan. 29, 1980
Murphy et al. (Murphy)	5,087,873	Feb. 11, 1992

The appealed claims stand finally rejected on the following grounds:

(1) Claims 1 to 27, unpatentable for failure to comply with 35 U.S.C. § 112, second paragraph;

(2) Claims 1, 3, 6 to 12, 15, 17, 18 and 22 to 27, anticipated by Murphy or Fichtenbaum, under 35 U.S.C. § 102(b);

(3) Claims 1, 3, 6 to 12, 15, 17, 18 and 22 to 27, unpatentable over either of Seddick or Fichtenbaum in view of Murphy, under 35 U.S.C. § 103.[2]

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[2] In the final rejection (Paper No. 4), claims 2, 4, 5, 13, 14, 16 and 19 to 21 were also rejected on grounds (2) and (continued...)

Rejection (1)

This rejection is stated on page 2 of the final rejection as follows:

> Claims 1-27 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear how the use of an analyzer or a processor is differentiated from each other as mentioned in claims 1, 12 and 17. A processor can be an analyzer such as a processor used in a personal computer to perform program execution that analyzes data. Furthermore, an analyzer can utilize a processor to perform analysis of a measured signal. A spectrum analyzer is an example of an item of test equipment capable of performing analysis and moreover it is well known in the art that these instruments can utilize processors such as a microprocessor.

From this statement, and the arguments made on page 6 of the answer, it appears to be the examiner's position that since an analyzer may include a processor, and a processor may be an

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[2](...continued)
(3), but the examiner states in the answer (page 3) that the rejections of those claims under 35 U.S.C. §§ 102(b) and 103 have been withdrawn.

analyzer, there is no clear distinction between the claimed analyzer and processor.

The test for compliance with 35 U.S.C. § 112, second paragraph, is

> whether the claim language, when read by a person of ordinary skill in the art in light of the specification, describes the subject matter with sufficient precision that the bounds of the claimed subject matter are distinct.

In re Merat, 519 F.2d 1390, 1396, 186 USPQ 471, 476 (CCPA 1975). Applying this test in the present case it would seem, first, that

the indefiniteness found by the examiner would be applicable only to claims which recite both an analyzer and a processor, i.e., claims 7 to 16. The scope of the system claims which recite an analyzer but not a processor (claims 1 to 6) is not indistinct, because the term "analyzer" would clearly cover all analyzers, regardless of whether they incorporated a processor or not, as long as they complied with the other claimed limitations. Likewise, the scope of method claims 17 to 27 is distinct, since they do not recite an analyzer or

processor, but instead recite, inter alia, steps such as "performing an analysis of the output" (claim 17) or "comparing the analysis with a reference" (claim 23), which do not require that they be performed by any particular apparatus.

As for claims 7 to 16, we do not consider that they are so unclear that one of ordinary skill would have any difficulty comprehending their scope. Claim 12, for example, calls for:

> an analyzer operable to measure the intensity of said detected emitted radiation; and
>
> a processor coupled to said analyzer, said processor operable to determine the parameter by comparing said measured intensity with a reference.

In our view, it would be evident to one of ordinary skill that the scope of this language is such that the claimed processor would read on any processor which was "coupled to said analyzer" and "operable to determine . . . with a reference," regardless of whether the processor performing the recited determining function was included as a part of the analyzer, or constituted a separate unit. This is particularly clear from the disclosure in the paragraph bridging pages 11 and 12

of the specification, to the effect that the analyzer and processor "may be physically separate or contained on the same device," e.g., as "part of a single computer system, such as a microprocessor system." As appellant states on page 6 of the brief,

> it should be clear from the Specification that any processing unit in the analyzer is different from the processor [as disclosed and claimed], which is used to process the measurement made by the analyzer.

We therefore conclude that claims 1 to 27 are in compliance with the second paragraph of § 112, and will not sustain rejection (1).

Rejections (2) and (3)

These rejections will be considered together, since each involves the same issue; namely, the scope of the term "radiation." Also, the rejected claims will all stand or fall together, as appellant has not given any explanation as to why

he believes any of them to be separately patentable. 37 CFR § 1.192(c)(7).

The three references involved disclose the detection of magnetic fields produced by electrical current flowing in the soil (Murphy) or in a wire (Fichtenbaum and Seddick). With respect to Murphy, appellant argues (brief, pages 6 to 7; original emphasis):

> Initially, Applicant points out that the existing claim language of "radiation" and "emitted radiation" clearly refers to, and should be construed to cover, light radiation in the form of photons emitted from the surface of the device or material. This meaning is clear from the Specification. *E.g.*, page 6, line 33 to page 7, line 17. Also, this meaning is in accord with the common meaning of "radiation" in this context. The American Heritage Dictionary, Second College Edition, for example, defines "radiation" as "... 2. *Physics*. a. The emission and propagation of waves or particles. b. The propagating waves or particles, such as light, sound, radiant heat, or particles, emitted by radioactivity."
>
> Applicant submits that the *Murphy* reference does not anticipate Applicant's claimed invention. Specifically, the *Murphy* reference does not disclose, as required by Claims 1 and 12, "a radiation

> detector operable to detect radiation emitted . . . , said emitted radiation caused by said current flow." The *Murphy* reference also does not disclose, as required by Claim 17, "detecting radiation emitted by the surface, the emitted radiation caused by said current flow in the surface."
>
> The *Murphy* reference discloses detecting magnetic fields produced by current in soil in which a pipe being tested is buried. Without question, the magnetic field produced by this flowing current is very different from, and does not anticipate, the emitted radiation of Applicant's claimed invention. In fact, the *Murphy* reference does not address, in any way, the emission or detection of radiation of Applicant's claimed invention.

The same argument is presented concerning the Fichtenbaum and Seddick references, and is the only argument made by appellant as to rejections (2) and (3).

It is fundamental that "[d]uring patent examination the pending claims must be interpreted as broadly as their terms reasonably allow." In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). In general, terms in a claim are to be given their ordinary and accustomed meaning; general descriptive terms will ordinarily be given their full

meaning, and modifiers will not be added to broad terms standing alone. Johnson Worldwide Assocs., Inc. v. Zebco Corp., ___ F.3d ____, ____, 50 USPQ2d 1607, 1610 (Fed. Cir. 1999). The examiner here does not contest the dictionary definition of "radiation" quoted by appellant, supra, but notes that the definition is not limited to light, sound, heat or particles emitted by radioactivity

(answer, page 7). He takes the position that one of ordinary skill would consider a magnetic field produced by flowing current to be radiation, quoting a paragraph to that effect from page 545 of a physics textbook.[3]

In addition to this text, we take official notice of pages 522, 523 and 1311 of the McGraw-Hill Dictionary of

[3] Bueche, Introduction to Physics for Scientists and Engineers, 2nd Ed. (McGraw-Hill, 1975). In addition to the paragraph quoted by the examiner, we note that in the last paragraph on page 546 there is reference to "a magnetic field radiated from the antenna" (emphasis added).

Scientific and Technical Terms (2nd Ed., 1978).[4] On page 1311, "radiation" is defined as "2. The energy transmitted by waves through space or some medium; when unqualified, usually refers to electromagnetic radiation. Also known as radiant energy." Since "electromagnetic radiation" is defined on page 523 as "Electromagnetic waves and, especially, the associated electromagnetic energy," and "electromagnetic energy" is defined on page 522 as "The energy associated with electric or magnetic fields" (emphasis added), it appears that the accepted definition of "radiation" includes energy from a magnetic field. Appellant has not submitted any evidence to the contrary.

We recognize that an applicant may be his or her own lexicographer by imparting a special meaning to a term used in the claims. However, this must be done "by clearly setting forth an explicit definition for a claim term." Johnson Worldwide Assocs., Inc., supra. The uncommon definition "must be done with reasonable clarity, deliberateness, and

[4] Copy enclosed.

precision," In re Paulsen, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994), and the special meaning "must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention." Multiform Desiccants Inc. v. Medzam Ltd., 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998).

In the present case, appellant's specification does not meet these criteria, since the term "radiation" is not explicitly defined therein. Also, although appellant's disclosure is generally directed toward the detection of photons, it implies that other types of radiation may be detected by its disclosure that radiation "being caused by current flowing in the surface" is detected (page 4, lines 8 and 9), and that "detector 16 may be any detector capable of detecting radiation" (page 6, lines 15 and 16; emphasis added).

We therefore conclude that the term "radiation" as used in the instant claims should be interpreted according to its ordinary and accustomed meaning. Since this meaning includes a magnetic field, "radiation" is readable on the magnetic fields detected by Murphy, Fichtenbaum and Seddick. Rejections (2) and (3) will accordingly be sustained.

Conclusion

The examiner's decision to reject claims 1 to 27 under 35 U.S.C. § 112, second paragraph, is reversed, and to reject claims 1, 3, 6 to 12, 15, 17, 18 and 22 to 27 under 35 U.S.C. §§ 102(b) and 103 is affirmed.

No time period for taking any subsequent action in con- nection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

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